

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1. (Previously Presented) The method of claim 11, wherein said diatomaceous algae is *Chaetoceros gracilis*.
2. (Previously Presented) The method of claim 11, wherein said diatomaceous algae is *Skeleonema costatum*.
3. (Previously Presented) The method of claim 1, wherein the growth-limiting factor is silicate deprivation.
4. (Previously Presented) The method of claim 1, wherein the growth-limiting factor is a nutrient deprivation.
5. (Previously Presented) The method of claim 1, wherein more than one growth-limiting factor is applied.
6. (Previously Presented) The method of claim 1, wherein the growth-limiting factor is applied once the culture has reached a concentration of at least 10^7 cells/mL.
- 7-10. (Cancelled)

11. (Currently Amended) A method for specifically producing polyunsaturated fatty acids from diatomaceous algae, comprising the step of applying at least one growth-limiting factor to a culture of diatomaceous algae at the end of the exponential growth phase, causing growth arrest of said culture and production and stocking by said algae in culture of polyunsaturated fatty acids.

12. (New) A method for producing specifically polyunsaturated fatty acids from diatomaceous algae, comprising the steps of:

- a. applying at least one growth-limiting factor to a culture of diatomaceous algae at the end of the exponential growth phase, causing growth arrest of said culture and production and stocking by said algae in culture of polyunsaturated fatty acids; and
- b. recovering the polyunsaturated fatty acids from said algae.